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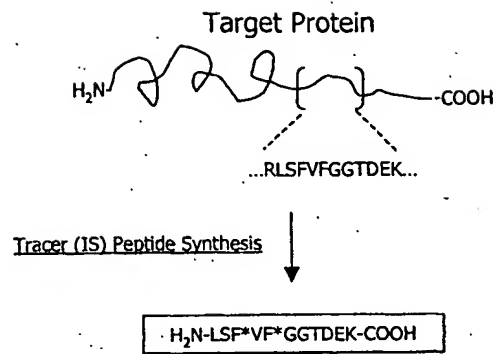
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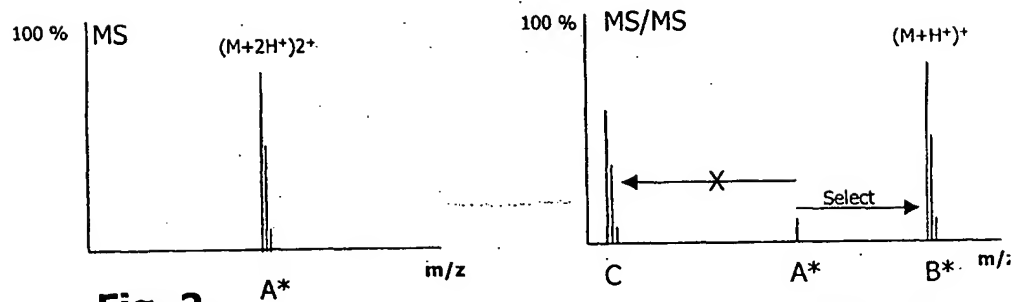
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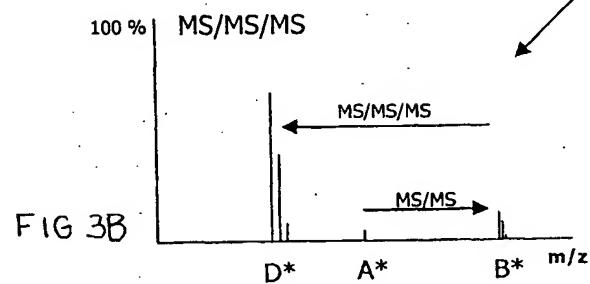


**Fig. 1**



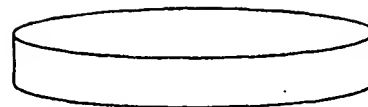
**Fig. 2**

**FIG 3A**



**FIG 3B**

Biological sample



Homogenize



Cell lysate (protein)



Add IS (e.g. 10 fmol)



Trypsinize



Cell lysate (peptides)



FIG. 4A

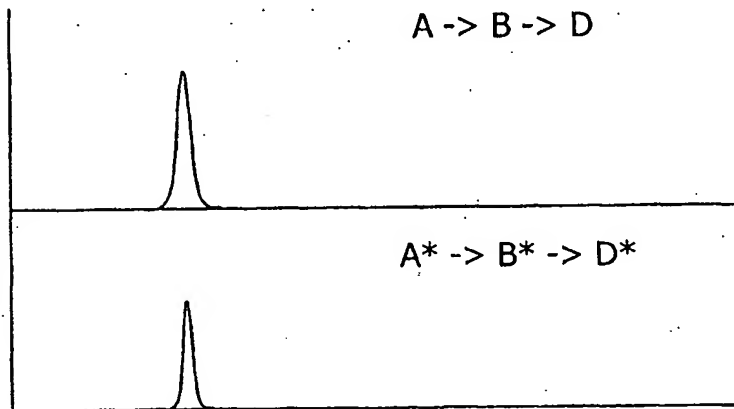
LC-MS/MS/MS

Ratio ( $D_{\text{auc}}/D^*_{\text{auc}}$ )=absolute quantification

A -> B -> D

A\* -> B\* -> D\*

Relative Intensity



Time

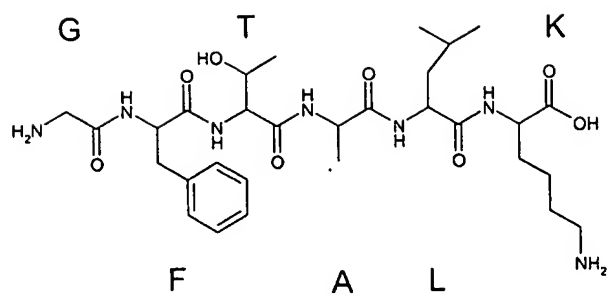
FIG. 4B

FIG. 5A

Native tryptic peptide

GFTALK

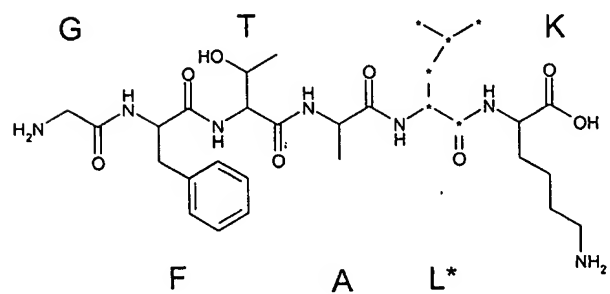
MW: 635.364



AQUA Internal Standard

GFTAL\*K

MW: 641.364



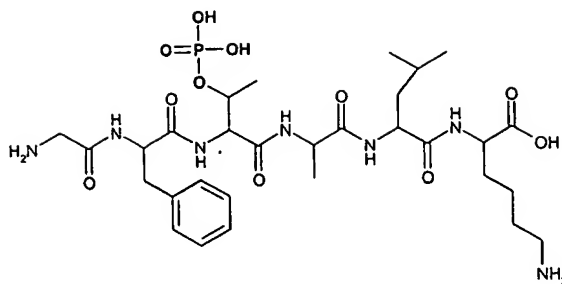
\* = stable isotope (e.g. <sup>13</sup>C)

FIG. 5B

Native phosphopeptide

GF(pT)ALK

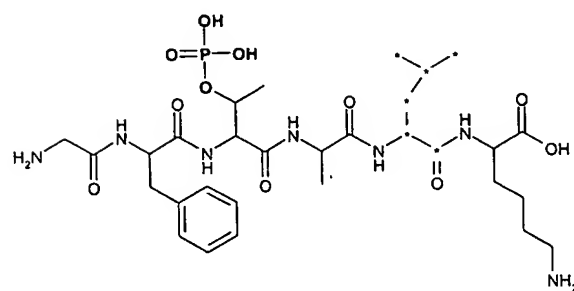
MW: 715.75



AQUA phosphopeptide  
Internal Standard

GF(pT)AL\*K

MW: 721.75



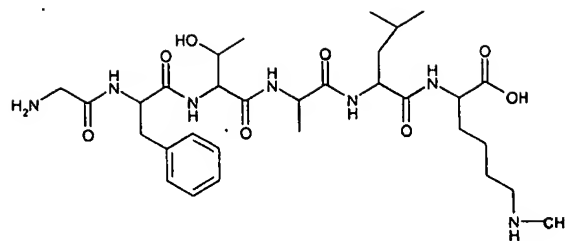
\* = stable isotope (e.g.  $^{13}\text{C}$ )

FIG. 5C

Native methylated peptide

GFTAL(mK)

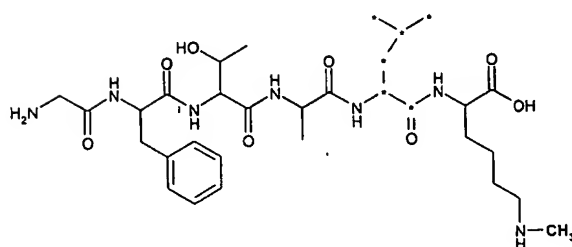
MW: 649.79



AQUA methylated peptide  
Internal Standard

GFTAL\*(mK)

MW: 655.79



\* = stable isotope (e.g.  $^{13}\text{C}$ )

FIG. 6

